REMARKS

Reconsideration of the present Application in view of the present Amendments and the following remarks is respectfully requested. Claim 1 was withdrawn by the Examiner; therefore, claims 2-14 are currently under examination in this Application. Applicants hereby cancel claims 1 and 3-6 without acquiescence to any rejection and without prejudice to further prosecution of this subject matter in a related divisional, continuation, or continuation-in-part application. Applicants have amended claims 2, 7-8, 10-11, and 14 and have added new claims 51-59 to define more clearly the subject matter encompassed by Applicants' invention. Support for the amended and new claims may be found in the specification, for example, at page 1, line 18 and line 30; page 6, lines 13-29; page 7, lines 17-28; page 9, lines 3-15; page 11, lines 12-20 (as amended herein); Figures 1-3; SEQ ID NOs:1, 2, and 3. The specification at page 5, line 17, and at page 31, line 15 has been amended solely to correct typographical errors. Support for the amended specification may be found, for example, at Figures 1-3, SEQ ID NO:1, and SEQ ID NO:2. No new matter has been added.

OBJECTIONS TO THE SPECIFICATION

The PTO asserts that the Application fails to comply with the requirements of 37 C.F.R. §§ 1.821-1.825. Specifically, the PTO asserts that amino acid sequences presented in Figure 3 are not identified by the assigned sequence identifiers.

Applicants thank the PTO for pointing out these informalities in the Application. Applicants submit that in view of the Amendment to the Brief Description of the Drawings (beginning at page 5, line 17) submitted herewith, specifically to include sequence identifiers for the sequences presented in Figure 3, the specification is in compliance with the sequence rules. Applicants respectfully submit that the Amendments introduce no new matter into the Application. Accordingly, the Application is in compliance with 37 C.F.R. §§ 1.821-1.825, and Applicants respectfully request that this objection be withdrawn.

The PTO objects to the disclosure, asserting that the specification contains an embedded hyperlink or other form of browser-executable code, for example, at page 9, line 15.

Applicants submit that in view of the Amendments to the specification submitted herewith, this objection has been obviated. The Application has been amended to remove citations of Internet website addresses by replacing paragraphs beginning at page 9, line 3, and at page 30, line 7, with redlined paragraphs. Accordingly, Applicants respectfully request that this objection be withdrawn.

OBJECTIONS TO THE CLAIMS

The PTO objects to claims 1 and 14 for informalities. Specifically, the PTO asserts that the abbreviation "DSP-2" recited in the claims should be first written out to define the term.

Applicants respectfully submit that in view of the Amendments submitted herewith, which include cancellation of claim 1 (which had been withdrawn by the PTO), that the grounds for the objection to claim 1 have been obviated. In accordance with the PTO's recommendation, Applicants have amended claim 14 to recite "dual specificity phosphatase 2 (DSP-2)" to provide a definition of "DSP-2" in the claims as it is defined in the specification (see page 3, line 18). Thus, Applicants respectfully request that the objection to the claims be withdrawn.

The PTO objects to claim 6 for informality, asserting that the claim depends on non-elected claim 1.

Applicants respectfully submit that in view of the Amendments submitted herewith, which include cancellation of claim 6, this objection has been rendered moot.

The PTO objects to claim 7, but concedes that the claim would be allowable if rewritten in independent form.

Applicants acknowledge and thank the Examiner for indicating that the subject matter of claim 7 is allowable if rewritten in independent form, as just noted. Accordingly, Applicants have amended claim 7 solely to place the claim in proper independent form for allowance. Applicants therefore respectfully request that the objection to the claim be withdrawn.

Applicants respectfully submit that all claims are in proper form for allowance and request that the objections to the claims be withdrawn.

REJECTIONS UNDER 35 U.S.C. § 112, FIRST PARAGRAPH (WRITTEN DESCRIPTION)

The PTO rejects claims 2-5 and 10-13 under 35 U.S.C. § 112, first paragraph, asserting that the claims are directed to subject matter that is not adequately described in the specification. More specifically, the PTO asserts that disclosure of a single species polynucleotide sequence (SEQ ID NO:1), encoding a full-length polypeptide (SEQ ID NO:2), is insufficient to show possession of all species within the claimed genus. The PTO further alleges that the specification does not describe identifying characteristics or provide any structure-function relationship of all members of the claimed genus.

Applicants respectfully traverse this rejection and submit that Applicants possessed the claimed invention, as disclosed in the present specification and recited in the instant claims, at the time the Application was filed. The invention is directed in pertinent part to an isolated polynucleotide that encodes a polypeptide comprising the sequence set forth in SEQ ID NO:2; to an antisense polynucleotide that is complementary to SEQ ID NO:1 or that is complementary to a polynucleotide that encodes a polypeptide capable of dephosphorylating a MAP-kinase, and that comprises a sequence at least 70% identical to a polynucleotide that encodes a polypeptide comprising a sequence set forth in SEQ ID NO:2; to an isolated polynucleotide that detectably hybridizes to the complement of the sequence recited in SEQ ID NO:1 under moderately stringent conditions, wherein the polynucleotide exhibits at least 70% nucleotide identity to SEQ ID NO:1 and encodes a polypeptide capable of dephosphorylating an activated MAP-kinase; to an expression vector comprising such polynucleotides; and to a host cell comprising such an expression vector.

The specification provides a detailed description of relevant and identifying characteristics of the claimed genus that reasonably conveys to a person skilled in the art that Applicants possessed more than a single representative species. In particular, the specification describes by its precise structure a polynucleotide sequence that encodes the polypeptide sequence set forth in SEQ ID NO:2, as well as describes polynucleotide variants that encode the same or related polypeptides. For reasons given in greater detail below, a skilled person would recognize that given the disclosure in the present application, including well-established principles of nucleotide base complementarity, the genetic code, sequence analysis, and protein

tyrosine phosphorylation, the attributes and features of the claimed subject matter are in fact well described.

The instant Application discloses a polynucleotide sequence (SEQ ID NO:1) encoding a DSP-2 polypeptide (SEQ ID NO:2), thus providing a detailed, structural chemical formula from which a skilled person may routinely make and use the claimed polynucleotides. As described in the specification, DSP-2 polynucleotides may comprise a native sequence or a variant of such a sequence (*see, e.g.,* page 9, lines 3-5). Polynucleotide variants may occur as a result of the degeneracy of the genetic code (page 10, lines 3-7), which comprises triplet codons having nucleotide sequences that are well known and conventional to persons skilled in the molecular biology art.

The specification also describes a DSP-2 polynucleotide that may encode a DSP-2 polypeptide variant capable of dephosphorylating an activated MAP-kinase, wherein the polynucleotide comprises a sequence at least 70% identical to a polynucleotide that encodes a polypeptide comprising an amino acid sequence set forth in SEQ ID NO:2 (*see, e.g.,* page 7, lines 17-28; page 8, line 25 through page 10, line 7; page 11, lines 12-20). As recited in the instant claims and described in the specification, the ability of the encoded DSP-2 variant to dephosphorylate tyrosine and threonine residues within a DSP-2 substrate is not substantially diminished relative to native DSP-2 (*see, e.g.,* page 6, lines 5-12; page 15, line 26 through page 17, line 16).

Moreover, the specification describes the structural features of the claimed subject matter that correlate with functional activity. Specifically, the active site domain comprising the sequence LHCAAGVSRS (SEQ ID NO:3) is located at positions 102-111 of SEQ ID NO:2 within the DSP-2 polypeptide sequence encoded by the claimed polynucleotides (*see, e.g.,* page 7, lines 21-23; page 11, lines 12-15; page 30, lines 5-12, and references therein; SEQ ID NO:2). On the basis of the disclosure of the specification, a skilled artisan would appreciate that a DSP-2 variant polypeptide encoded by the claimed polynucleotides preferably contains conservative substitutions such that the catalytic activity of the variant is not substantially changed (*see, e.g.,* page 6, lines 5-8). The specification also describes that the catalytic activity of the enzyme may be disabled if the cysteine residue within SEQ ID NO:3, which is located at position 104 in SEQ ID NO:2, and/or the aspartate residue that is located N-terminal to the active site motif (residue

73 of SEQ ID NO:2) are substituted (*see, e.g.,* page 6, lines 13-31). Therefore, a DSP-2 polynucleotide that may encode a DSP-2 polypeptide variant capable of dephosphorylating an activated MAP-kinase preferably retains these cysteine and aspartate residues. Applicants submit that a person skilled in the art would therefore be able readily to identify the species encompassed by the instant claims, given the recited *structural* features of DSP-2 sequences and amino acid sequence position numbers, *and* the recited *functional* feature that the DSP-2 polypeptides retain the ability to dephosphorylate an activated MAP kinase.

As is well known in the art, the ability of a polynucleotide to hybridize to a complementary nucleic acid molecule depends on the chemical properties of the nucleic acids involved, which are determined by the nucleotide sequences of such molecules. Accordingly, by providing a polynucleotide sequence (SEQ ID NO:1), the application describes a complementary, hybridizing polynucleotide. With respect to claims 10-13, Applicants therefore submit that disclosure by the instant Application of the complete chemical structure of a polynucleotide (SEQ ID NO:1) encoding a DSP-2 polypeptide (SEQ ID NO:2), or a variant of such polynucleotide, (*see, e.g.,* page 9, line 3 through page 10, line 2; page 12, line 14 through page 13, line 4) provides sufficiently detailed and relevant identifying characteristics of the claimed polynucleotide. As noted above, according to the specification a polynucleotide variant of a DSP-2-encoding polynucleotide includes a polynucleotide that exhibits at least 70% nucleotide identity to a polynucleotide comprising the sequence set forth in SEQ ID NO:1 (*see, e.g.*, page 9, lines 8-11). The instant specification also discloses that such a polynucleotide variant is substantially homologous to a naturally occurring DNA or RNA that encodes a native DSP-2 polypeptide and is capable of hybridizing to a disclosed DSP-2-encoding sequence, such as SEQ ID NO:1, under moderately stringent conditions (*e.g.*, page 9, lines 15-22). Additional stringency is provided by a wash in 0.1X SSC and 0.1% SDS at 50 °C for 15 minutes (*e.g.*, page 9, lines 23-25). Therefore, the instant specification reasonably conveys sufficient, detailed, and relevant characteristics of species within the claimed genus of polynucleotides.

Applicants have established that the presently claimed subject matter is adequately described by the specification such that a person skilled in the art would recognize that Applicants possessed the claimed invention at the time the Application was filed. Applicants therefore submit that the instant Application complies with the written description

requirement under 35 U.S.C. § 112, first paragraph, and respectfully request that the rejection be withdrawn.

REJECTIONS UNDER 35 U.S.C. § 112, FIRST PARAGRAPH (ENABLEMENT)

The PTO rejects claims 2-6 and 8-14 under 35 U.S.C. 112, first paragraph, for lack of enablement. The PTO concedes that the specification is enabling for an isolated polynucleotide comprising a sequence set forth in SEQ ID NO:1 that encodes a full-length DSP-2 polypeptide of SEQ ID NO:2. However, the PTO alleges that the specification does not enable a skilled artisan to make and use any polynucleotide that hybridizes to SEQ ID NO:1 or that encodes a fragment having unknown activity and comprising at least 10 or 15 contiguous amino acids of SEQ ID NO:2.

Applicants respectfully traverse this rejection and submit that as disclosed in the present specification and recited in the claims, Applicants fully enabled the claimed invention at the time the instant Application was filed. Applicants submit that the disclosure provides enabling guidance for a person skilled in the art to make and use the claimed polynucleotides encoding a DSP-2 polypeptide readily and without undue experimentation. As conceded by the PTO, the specification is enabling for a polynucleotide sequence (SEQ ID NO:1) that encodes a DSP-2 polypeptide (SEQ ID NO:2) that is capable of dephosphorylating a DSP-2 substrate, for example, an activated MAP-kinase (*see, e.g.,* page 5, line 29 through page 6, line 4). As taught in the specification, DSP-2 polynucleotides may comprise a native sequence or a variant of such a sequence (*see, e.g.,* page 9, line 3 through page 10, line 7). Such polynucleotide variants may occur as a result of the degeneracy of the genetic code (page 10, lines 3-7), which is well known and routinely used by persons skilled in the molecular biology art. The specification further describes how to make and use an isolated polynucleotide that encodes a DSP-2 polypeptide variant capable of dephosphorylating an activated MAP-kinase, wherein the polynucleotide comprises a sequence at least 70% identical to a polynucleotide that encodes a polypeptide comprising an amino acid sequence set forth in SEQ ID NO:2 (*e.g.,* page 9, lines 3-11). By using computer algorithms well known in the art and disclosed in the specification, such as Align or the BLAST algorithm, a person skilled in the art can determine the percent identity of a polynucleotide to the disclosed DSP-2 polynucleotide sequence (*see, e.g.,* page 9, lines 11-16).

The DSP-2 polypeptide encoded by the claimed polynucleotide belongs to the family of protein tyrosine phosphatases that share a conserved catalytic domain containing a cysteine residue situated N-terminal to a stretch of five variable amino acids followed by an arginine residue (*see, e.g.,* page 30, lines 5-12, and references therein). For determining that a polynucleotide encodes a DSP-2 polypeptide that retains the ability to dephosphorylate an activated MAP-kinase, the specification explicitly teaches that the DSP-2 active site domain comprises the sequence LHCAAGVSRS (SEQ ID NO:3) located at positions 102-111 of SEQ ID NO:2 (*see, e.g.,* page 7, lines 21-23; page 11, lines 12-15; SEQ ID NO:2). The specification also describes the relationship between wild-type aspartate at position 73 of SEQ ID NO:2 and DSP-2 catalytic activity, for example, through the use of substrate trapping mutants of DSP-2 (*see, e.g.,* page 6, line 13 through page 7, line 2, and references cited therein). Thus, clearly, given the DSP-2 polynucleotide sequence and the locations within the encoded DSP-2 polypeptide sequence of the amino acids comprising the catalytic active site, a skilled artisan, using alignment methods as discussed above, would be able to identify readily and routinely whether a polynucleotide will encode a catalytically active DSP-2 polypeptide.

Furthermore, a person skilled in the art would be able to identify or make a DSP-2 polypeptide, or a variant thereof, that retains the ability to dephosphorylate a DSP-2 substrate, according to methods known in the art and disclosed in the specification without undue experimentation (*see, e.g.,* page 15, line 27 through page 17, line 16). A skilled artisan can identify such a DSP-2 polypeptide by expressing the polynucleotide (*see, e.g.,* page 8, lines 3-24; page 13, lines 23-31; *see also* pages 19-22). The polypeptide produced can then be routinely analyzed for its ability to dephosphorylate a suitable substrate such as an activated MAP-kinase, according to assays for detecting DSP-2 activity, which are also described in the specification (*see, e.g.,* pages 15-17). Applicants respectfully submit that given the teachings of the present specification and, *inter alia*, the level of skill in the art, performing such assays to determine whether an encoded DSP-2 polypeptide has MAP-kinase phosphatase activity would not amount to undue experimentation, but instead is merely a matter of permissible routine screening. (*See In re Wands*, 858 F.2d 731, 736, 8 U.S.P.Q.2d 1400 (Fed. Cir. 1988) ("Enablement is not precluded by the necessity for some experimentation such as routine screening.")).

Applicants further submit that a skilled artisan could readily and without undue experimentation make and use an antisense polynucleotide comprising a sequence that is complementary to a polynucleotide encoding a DSP-2 polypeptide as recited in the instant claims. According to methods known in the art and described in the present specification, by using the polynucleotide sequence set forth in SEQ ID NO:1, a person skilled in the art would readily be able to design and make an antisense polynucleotide that binds in a sequence-specific manner to a DSP-2 polynucleotide or a variant thereof, for example, to prevent transcription or translation of a polynucleotide encoding a DSP-2 polypeptide (*see, e.g.,* page 11, line 30 through page 13, line 4).

Additionally, and particularly with regard to claims 11-13, given the teachings of the present specification and the state of the art, a person skilled in the art is enabled to make and use the recited isolated polynucleotide that detectably hybridizes to a polynucleotide having a sequence complementary to a sequence set forth in SEQ ID NO:1, under the recited conditions, wherein the isolated polynucleotide has at least 70% nucleotide identity to a polynucleotide comprising the sequence set forth in SEQ ID NO:1, and wherein the isolated polynucleotide encodes a polypeptide capable of dephosphorylating an activated MAP-kinase. As disclosed in the specification and as known to the art, suitable moderately stringent hybridization conditions may include the addition of the recited wash step in a hybridization procedure to provide additional stringency (*e.g.,* page 14, lines 15-20). As is well understood in the art, variations in stringency or hybridization conditions may be achieved readily and routinely by altering any one or more of time, temperature, and concentration of solution components that are used for prehybridization, hybridization, and wash steps (*see, e.g.,* page 9, line 22 through page 10, line 2).

In view of the above remarks and the present Amendments, Applicants submit that the specification also enables a person skilled in the art to make and use related compositions, such as the expression vector of claims 8 and 12 and the host cell of claims 9 and 13 (*see, e.g.,* page 13, line 23 through page 15, line 17). The specification further discloses, in detail, methods for producing and detecting expression of a DSP-2 polypeptide (*see, e.g.,* page 8, lines 3-15; page 15, lines 18-24; pages 19-22). On the basis of the disclosure in the specification and methods well known in the molecular biology art, persons skilled in the art would be able to

make and use the aforementioned compositions and methods readily and without undue experimentation.

Applicants therefore respectfully submit that the present Application satisfies all requirements under 35 U.S.C. § 112, first paragraph, and request that the rejection of the instant claims be withdrawn.

REJECTIONS UNDER 35 U.S.C. § 102

The PTO rejects claims 2, 3, 6, 10, and 11 under 35 U.S.C. § 102(a) as being anticipated by (1) Strausberg (A) (EST, Acc. No. AI215158; February 2, 1999); (2) Strausberg (B) (EST, Acc. No. AA926744, June 17, 1998); and (3) Strausberg (C) (EST, Acc. No. AI283262; January 28, 1999). In particular, the PTO asserts that (1) AI215158 teaches a polynucleotide sequence that shares 99.4% identity to nucleotides 273-767 of SEQ ID NO:1; (2) AA926744 discloses a polynucleotide sequence that shares 99.0% identity to nucleotides 352-834 of SEQ ID NO:1; and (3) AI283262 teaches a polynucleotide sequence that shares 100% identity to nucleotides 323-763 of SEQ ID NO:1. The PTO further asserts that each document teaches an EST that encodes a protein tyrosine family member that is more than 50% homologous to SEQ ID NO:2 and that comprises at least 10 or 15 amino acids thereof. The PTO also asserts that each EST comprises 15 nucleotides that are complementary to, and that will hybridize with, a polynucleotide having the sequence of SEQ ID NO:1.

Applicants respectfully traverse this rejection and submit that the cited documents fail to anticipate the instant claims as amended herewith. Applicants submit that the rejection of claims 3 and 6 as allegedly anticipated by Strausberg A, B, or C is rendered moot by the Amendments submitted herewith, which include cancellation of these claims.

Applicants respectfully submit that each of the Strausberg A, B, or C documents fails to anticipate each and every limitation of the claims and, therefore, cannot be regarded as novelty destroying. The cited documents fail to teach or suggest an isolated polynucleotide that encodes a polypeptide comprising an amino acid sequence set forth in SEQ ID NO:2. The cited documents also fail to teach or suggest an antisense polynucleotide comprising a polynucleotide that is complementary to SEQ ID NO:1 or to a polynucleotide that encodes a polypeptide capable of dephosphorylating an activated MAP-kinase, wherein the isolated polynucleotide

comprises a sequence at least 70% identical to a polynucleotide that encodes a polypeptide comprising a sequence set forth in SEQ ID NO:2. Each document also fails to teach or suggest an isolated polynucleotide that detectably hybridizes to the complement of the sequence set forth in SEQ ID NO:1 under the recited conditions, wherein the isolated polynucleotide exhibits at least 70% nucleotide identity to a polynucleotide comprising the sequence set forth in SEQ ID NO:1, and wherein the isolated polynucleotide encodes a polypeptide capable of dephosphorylating an activated MAP-kinase.

Each of Strausberg A, B, and C merely discloses an EST having a sequence that shares identity with less than 60% of SEQ ID NO:1 and less than 65% of the portion of SEQ ID NO:1 that encodes SEQ ID NO:2 (*see* Figure 1; SEQ ID NOs: 1 and 2). Also under 35 U.S.C. § 102, a document must enable the claimed invention to properly support a novelty rejection. The cited documents do not disclose the claimed polynucleotides, nor do they inherently describe the sequences. Therefore, a person skilled in the art would not be enabled by any of Strausberg A, B, or C to make and use the claimed polynucleotides, related compositions, and methods. Applicants therefore submit that the subject matter of the claims is novel and respectfully request that these rejections be withdrawn.

The PTO rejects claim 6 under 35 U.S.C. § 102(a) as being anticipated by Yuan et al. (EST, Acc. No. AF038844; January 6, 1999). The PTO alleges that AF038844 teaches a polynucleotide that encodes a "MKP-1 like protein tyrosine phosphatase" of 198 amino acids that is 52.1% identical to SEQ ID NO:2.

The PTO further rejects claims 6, 8, 9, and 14 under 36 U.S.C. § 102(e) as being anticipated by Lal et al. (U.S. Patent No. 6,165,767). The PTO asserts that Lal et al. teach a polynucleotide (SEQ ID NO:6) that encodes a "protein phosphatase related molecule" (SEQ ID NO:5), which allegedly is 52.1% identical to the DSP-2 polypeptide (SEQ ID NO:2) encoded by the claimed polynucleotides. The PTO also asserts that Lal et al. teach a vector, a host cell comprising the vector, and a method for producing the polypeptide.

Applicants respectfully submit that in view of the Amendments submitted herewith, which include cancellation of claim 6, the rejection of claim 6 as allegedly anticipated by Yuan et al. and the rejection of claim 6 and dependent claims 8, 9, and 14 as allegedly

anticipated by Lal et al. are rendered moot. Furthermore, Lal et al. fail to teach or suggest an expression vector that comprises a polynucleotide that encodes a polypeptide comprising an amino acid sequence set forth in SEQ ID NO:2; a polynucleotide comprising the sequence set forth in SEQ ID NO:1; an antisense polynucleotide as recited; or an isolated polynucleotide as recited that hybridizes under the recited conditions to SEQ ID NO:1. Lal et al. further fail to teach or suggest a host cell that comprises such a vector and fail to teach a method using the host cell to produce a DSP-2 polypeptide. Therefore, Lal et al. do not anticipate any claimed subject matter.

Applicants therefore respectfully submit that the subject matter of the present claims is novel, and thus the claimed invention complies with the requirements of 35 U.S.C. § 102. Applicants therefore respectfully request that these rejections be withdrawn.

REJECTIONS UNDER 35 U.S.C. § 103

The PTO rejects claims 4, 5, 8, 9, and 12-14 under 35 U.S.C. § 103(a), alleging that the claims are obvious over Strausberg (A, B, or C). The PTO alleges that it would have been obvious to a person having ordinary skill in the art to include any one of the ESTs disclosed in the cited documents in a vector and express it in a host cell, or to use any of the ESTs or fragments thereof as probes and primers in a method for detecting the full-length sequence.

The PTO also rejects claims 8, 9, and 14 under 35 U.S.C. § 103(a) as being anticipated by Yuan et al. Specifically, the PTO alleges that it would have been obvious to a person having ordinary skill in the art to include the EST disclosed in the cited document in a vector and express it in a host cell. The PTO further alleges that a skilled artisan would have been motivated to produce a phosphatase encoded by the EST to produce an antibody.

Applicants respectfully traverse this rejection and submit that the documents cited by the Action each fail to teach or suggest the subject matter of the instant claims. Applicants respectfully submit that the PTO has not established a *prima facie* case of obviousness. *See In re Mayne*, 104 F.3d 1339, 1341-43, 41 U.S.P.Q.2d 1451 (Fed. Cir. 1997) (PTO has the burden of showing a *prima facie* case of obviousness.). The PTO must show (1) that a reference teaches or suggests all claim limitations; (2) that the reference provides some teaching, suggestion, or motivation to combine or modify the teachings of the prior art to produce the claimed invention;

and (3) that the teachings of the reference indicate that a person having ordinary skill in the art will achieve the claimed invention with a reasonable expectation of success.

Applicants respectfully submit that a *prima facie* case of obviousness has not been established because Strausberg A, B, or C, each alone or in combination with any other prior art document, fails to teach or suggest each and every limitation of claims 4, 5, 8, 9, and 12-14. Applicants also submit that Yuan et al., alone or in combination with any other document, fail to teach or suggest each and every limitation of claims 8, 9, and 14. As noted above, each of Strausberg A, B, and C merely discloses an EST having a sequence that shares identity with less than 60% of SEQ ID NO:1 and less than 65% of the portion of SEQ ID NO:1 that encodes SEQ ID NO:2 (*see* Figure 1; SEQ ID NOs: 1 and 2). Additionally, Yuan et al. disclose only a polynucleotide sequence that is less than 60% identical to the polynucleotide sequence set forth in SEQ ID NO:1. Applicants, however, teach and claim polynucleotides with at least 70% identity to SEQ ID NO:1.

Therefore, a person having ordinary skill in the art could not reasonably expect to obtain the claimed expression vector, or a host cell comprising such a vector, or a method for producing the DSP-2 polypeptide using such a host cell in view of any one or more of Strausberg A, B, or C, or Yuan et al., which alone or in combination with any other prior art document fail to teach or suggest the claimed polynucleotides. Moreover, each of the cited documents provides no teaching, suggestion, or motivation to a skilled artisan to use, or to combine, the disclosures of the cited documents to obtain the claimed vector, host cell, or method for producing a DSP-2 polypeptide with the requisite reasonable expectation of success.

At best, the PTO's assertion of nonobviousness relies on the illegitimate test that an ordinarily skilled artisan might find it "obvious to try" to obtain the claimed vector, host cell, or method using the disclosure of any of the cited documents. *See In re Fine*, 837 F.2d 1071, 1075 (Fed. Cir. 1988) ("...[W]hether a particular combination might be "obvious to try" is not a legitimate test of patentability."). However, the skilled artisan could not have reasonably expected to obtain the claimed subject matter because the cited documents provide no guidance for obtaining a vector that comprises a polynucleotide that encodes a polypeptide capable of dephosphorylating an activated MAP-kinase and that comprises a sequence at least 70% identical

to a polynucleotide encoding a polypeptide comprising SEQ ID NO:2 when each of the cited documents discloses a nucleotide sequence that has less than 60% identity to SEQ ID NO:1.

Accordingly, Applicants respectfully submit that the subject matter of the present claims is nonobvious, thus satisfying the requirements under 35 U.S.C. § 103. Applicants therefore request that the rejection of these claims be withdrawn.

The Commissioner is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Applicants respectfully submit that all claims remaining in the Application are allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,
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